Financing Primary Care in Rural America

A Research Agenda for the Health Care Financing Administration

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INTRODUCTION

Primary care in the United States is more of a symbolic concept than a description of a specific level or division of care. Primary care is a term which anyone presently involved in the medical or health care fields would recognize and likely either understand in a general sense or have a clear opinion about its meaning. Since the mid-1960s, the term has gained worldwide usage in technical, scientific, and lay publications variously to describe practitioners, symptoms, diagnoses, organizations, and an array of services. From that time, the term 'primary care' has shifted from the center of controversy over the best way to organize the delivery of medical care in the United States to a role as a conceptualization of an unmet ideal. Its definition has held important political and practical consequences for the training of physicians and mid-level practitioners but it has not been used in a normative sense in financing health services. Mainly, primary care has meant a pathway to reforming medicine, to making it more rational and more equitable. However, once the concept of primary care came to refer to every category of medical specialty practice where first contact care was provided, it began to lose its distinctive meaning. Primary care remains alive in its application to rural America because there is widespread acceptance of the idea that the nation should provide, *at least*, primary care services to all of its citizens. The Health Care Financing Administration is charged with the responsibility of making payments for and ensuring the quality of medical care delivered to this nation's Medicare and Medicaid beneficiaries. Implicit

to the charge to HCFA is that those eligible should receive care appropriate to their needs; this further implies that effective primary care services be available, accessible, and integral to the medical care system which Medicare and Medicaid beneficiaries use.

In this paper, we will consider primary care to encompass those basic health care services which are used most of the time in the case of personal illness, chronic disease management, or health maintenance, and to further include emergency health care and preventive health services such as periodic screening maneuvers and immunizations, as well as hospital care for conditions which do not require surgery or extensive high-technology diagnostic evaluation. Primary health care is not a level of health service exclusively provided by physicians; a variety of personnel from the fields of nursing, dentistry, optometry, pharmacy, social work and allied fields may be involved. However, in this paper we will focus most often on the services normally provided by physicians and nurses (including the services of nurse practitioners and physicians' assistants).

RURAL AND RURALITY IN A MEDICAL FINANCING CONTEXT

In planning for health care services in any society, special arrangements have to be made to ensure the availability of services to persons who reside in remote or rural areas (Madison and Combs, 1981). In the case of HCFA's charge, there must a be a similar special set of considerations for these populations. These special arrangements must take into account the social and cultural factors which affect the expectations and the behavior of health care consumers, as well as the expectations and behaviors of health services providers (Wright, 1976; Cordes, 1989). A complex web of social, cultural and economic values has enormous influence

on the way in which health care needs are expressed as expectations (or as patterns of health services use) by persons in different communities. Furthermore, there is far more diversity among rural areas (from the low-income rural areas of the Southeast, to the large farms of the Midwest, for example) than is often acknowledged in crude classifications of places on the basis of population density alone. In no area of health care financing is this more evident than in payment for primary care services, for it is these services that one needs most often and with which one most closely identifies as a health services consumer.

Any discussion of the problems of rural versus other populations eventually requires a definition of the term 'rural'. The answer that will be operative in this paper is that there are many kinds of rural populations and that, although there are clear distinctions in medical care utilization, supply, and structure between broadly defined urban and rural populations, it is clear that there are a number of different types of rural communities, especially in relation to the issue of reimbursement for primary care. In their study of subsidized rural primary care programs, Sheps and colleagues were able to identify four distinct types of rural communities in which these programs functioned: I. Growing, relatively more densely populated communities; II. Very poor communities with a distinct social services structure; III. Isolated communities; and IV. Communities with a high proportion of Black residents with generally lower access (measured by availability) to services (University of North Carolina, 1983, 1985; Ricketts, Konrad, Wagner, 1983). These community structures (all of the communities were classified as rural communities under strict definitions) were correlated with the ability of the programs to support themselves when the following factors were accounted for: the "competitive strategies" employed by the programs, the policies

prevalent in the state where the programs were located, and their organizational structures. These competitive strategies and organizational structures represented options for policy-directed initiatives to develop primary care services in communities where subsidy would be required either to start up programs or to provide necessary continued subsidy.

The differentiation of rural communities according to their characteristics relating to primary care and other levels of medical care delivery is something that has not been well advanced. Most attempts to define rural communities rest on fundamental socio-demographic differences which may or may not be relevant to the financing and delivery of health and medical services. Likewise, policy environments have a great deal of influence on the ability of a community to obtain providers and resources as well as support them. Communities with very similar sociodemographic characteristics which are in the same region of the country but in different states or HCFA payment regions may present completely different pictures of access to, costs of, and reimbursement structures for primary care.

IMPACTS OF RURALITY ON UTILIZATION, STRUCTURE, AND FINANCING

Most policy considerations of health care for rural areas deal in some fashion with the difficult issue of defining minimally adequate levels of service, or the question of equity in access to care. These concepts are problematic in health policy analysis for they raise the issue of whether health care resource allocation should take place on the basis of "need" for service or "demand" for service. There is little question that using time and distance standards of accessibility derived from urban areas to establish the standards for access to care in rural areas (at all levels: primary, secondary,

tertiary) is an unworkable approach. Yet, in most rural areas, even the effort to provide for access to basic primary health services requires some form of special subsidy to finance this level of care availability.

The subsidization of rural health care can be justified on the basis of the apparent extent to which rural residents "subsidize" the care available to urban and suburban residents through a series of cross-payments for third party insurance (particularly Medicare). However, this system fails to recognize the generally lower levels of utilization of primary health care services among rural residents when compared with urban residents (Ricketts, DeFriese and Seipp, 1979), and the greater burden of illness (particularly chronic) and disability in rural areas. Medicare's prospective payment system recognizes a 25 percent differential in standardized average costs per admission between rural and urban areas. This occurs despite the lack of any firm evidence that the costs of care in the two types of hospitals and communities are indeed different. Cromwell, Mitchell, Calore and Iezzoni (1987) have found that the differences can be explained only partly by case-mix and wage differentials. Urban hospitals and physicians may be more aggressive in their treatment and/or rural hospitals and physicians may not be providing "enough" care, even when appropriate. The phenomenon of cross-subsidization of health services by rural residents for urban or suburban residents has not been clearly established. Nycz and his colleagues at the Marshfield Medical Foundation are attempting to illustrate the differentials of payment levels provided under the AAPCC system between urban and rural areas and relate those differences to potential flows of resources and access issues (Nycz, 1988). That same group will also be focusing on the problems of physician participation in assignment under Medicare. McMenamin reported that "a substantial fraction of unassigned liabilities

may derive from office visits because of the relatively low Medicare allowances and low participation rates by primary care physicians" (McMenamin, 1987). The fact that the Medicare economic index may have locked in some rural communities to a payment rate may reflect a potential brake on medical service expansion into these communities and the matching of services to needs where there is growth or change. There needs to be additional understanding of the degree to which beneficiaries have access to assignment and whether there are significant differentials based on geographic location, i.e., between types of rural communities and urban and suburban communities. The Marshfield Rural Health Research Center will be exploring this question along with an analysis of beneficiary unassigned claim contrasts between urban and rural areas, and the impact of approved charge levels on physician fees.

Information concerning the differences in costs of medical practice between urban and rural areas is limited, and based on broad scale sample surveys which do not differentiate adequately between and among rural areas, and have limited applicability in gross comparisons between urban and rural communities. The Physician Payment Review Commission has requested more study of these differences and HCFA is funding a survey of 6,000 physician practices to produce updated costs estimators. That study has severe limitations with regard to urban-rural questions and does not take into consideration the impact upon practice costs of environmental and competitive influences such as differing state policies, hospital relationships, group relationships, and market area structures. Each of these factors should be studied.

If a research goal is to develop accurate primary care production and costs functions for rural practices, then the same typologies of structure and

environment that apply to all primary care practices will have to be introduced as controls. The National Evaluation of Subsidized Rural Primary Care Programs (University of North Carolina, 1983, 1985; Ricketts, 1988) estimated that differentials in self-sufficiency ratios (costs/practice revenues) varied by a factor of as much as 3:1 due to direct environmental influences on ability to generate revenues. Direct influences on costs were caused by differences in productivity related to the age of the practice, physician turnover and satisfaction, and, to a lesser degree, the population density of the community.

ALTERNATE DELIVERY SYSTEMS AND PRIMARY CARE

Alternative delivery systems (HMOs, PPOs, and primary care case management systems) are difficult to implement in rural areas, yet they represent the best available mechanisms to optimize primary care access and the appropriate use of services. A paper prepared by Jon Christianson (1989) for the Rural Health Research Agenda Conference, "Alternative Delivery Systems in Rural Areas," provides an excellent summary description of the concept of alternative delivery systems and their applicability to rural populations and communities along with a specific research agenda for the study of those systems. Research into the performance of alternative delivery systems in rural areas is, according to Christianson, very incomplete and is largely based on case studies of several HMOs. Therefore, any focus on the financing of primary care in rural areas through these mechanisms would require fundamental and broad scale research into the feasibility, access, and quality of such systems.

The Medicaid program has developed many initiatives in the area of case management (Freund and Neuschler, 1986). This implementation has

been undertaken in part to solve problems in access to primary care as well as to slow the rise in costs of delivery of care. The review by Freund and Neuschler identified 13 states which have used their waiver authority to implement primary care case management programs. Those programs fall into four major categories: 1. Traditional Medicaid with primary care case management; 2. Prepaid capitation contracts with multiple HMOs; 3. Primary care case management through health insuring organizations; and 4. Contracting with primary care physicians on a partial capitation basis. All of these approaches have been applied to rural areas. These arrangements have been very difficult to implement for various reasons. They are complex and require management personnel who are familiar with the systems they are meant to replace as well as the intricacies of the Medicaid system; providers are often reluctant to enter into such programs; the eligibility and enrollment process represents another level of complexity as the interface with the social service system may not operate smoothly when starting up such a a program. Yet, where the system has been implemented there have been substantial savings reported with few concerns over quality.

Rural alternative delivery systems are a viable option for improving access and controlling costs. However, we do not have information on their prevalence in rural America, we know little about why rural residents choose or do not choose an alternative delivery system, and we do not know why some rural communities have alternative systems and others do not. These represent the basic research questions regarding rural alternative delivery systems.

The recent alarming rise in infant mortality, especially in rural areas, combined with a spreading malpractice crisis which has deeply affected obstetrical service access in rural areas, has drawn attention to programs that

directly address perinatal care. The Medicaid program was used to partially fund an experimental program fielded in California called the Obstetrical Access Pilot Project that used a modified fee-for-service arrangement along with a specified maternity benefit package to try to improve access to obstetrical and perinatal services for low-income mothers and infants (Lennie, Klun, and Hausner, 1987). The program was implemented in 13 counties where there was a documented lack of access to maternity care for low-income women. The results of an evaluation of this pilot program indicate that it was effective in improving birth outcomes and was cost-effective to the Medi-Cal system. There was no indication in the summary of this project that there were differentials in rural-urban effects of the program. A similar program has been implemented in North Carolina as an attempt to address problems of access and outcome for low-income mothers. That program is coordinated through the State's Medicaid office and is being implemented through rural and urban community health centers and health departments. That program provides a vehicle for in-depth assessment of a statewide program's impact as well as the opportunity to assess any differences between rural and urban applicability of such an approach.

Alternative financing experiments driven by the Medicaid system are not the only avenues open for expanding access. Community health centers and rural health centers remain important contributors in the primary care delivery systems in rural communities. They depend upon Medicaid support for their operating revenues, however, there is some indication that available Medicaid resources are not efficiently used. In a sample of 193 such programs surveyed by the National Evaluation of Subsidized Rural Primary Care Programs, 18.8 percent of all users had Medicaid coverage but only 11.1 percent of patient revenues and 7.08 percent of total revenues (includes

subsidies) were from Medicaid (University of North Carolina, 1985). The examination of the impact of Medicaid eligibility and payment levels upon the clinics studied in the evaluation showed that "federal grants are replacing income that could be generated from Medicaid if the states would expand eligibility for the program. On the other hand, patient care income does not show a definite trend in relationship to Medicaid eligibility. Further analysis of the interaction between Medicaid reimbursement rules and rates and the financial structures of subsidized programs would be desirable." (University of North Carolina, 1985, p 71.) That call for additional research is repeated here, in that there should be a full-scale study of the substitution phenomenon between Medicaid and subsidies which includes controls for state policies and reimbursement patterns.

The Rural Health Clinic Services Act, which allowed for direct reimbursement for nurse practitioner and physician's assistant services in designated rural clinics for Medicare and Medicaid eligibles, provided a boost in revenues for the programs. However, there is some evidence that this represents only a very small portion of patient care income for the total range of clinics, and that the distribution of eligible practitioners in these programs is declining, which raises the possibility that this avenue may represent a declining source of revenue. A study which will update the status of the rural clinics' direct reimbursement effects should be incorporated within the study of Medicaid effects and coordinated with an update on the current and future distribution of mid-level practitioners.

HOSPITALS AND PRIMARY CARE FINANCING

The relationship between rural primary care clinics and hospitals is a complementary one. The hospitals depend upon the clinics for referrals and

some staffing, while the clinics depend upon the hospitals for secondary and sometimes tertiary service support as well as for their role in retaining physicians by serving as loci for continuing education and professional stimulation (McLaughlin, Ricketts, Freund, Sheps, 1985; Deprez, Pennel, Libby, 1987). In the former study both costs and revenues of the rural health centers were found to be reduced when there was substantial use of a hospital(s) by clinic staff. The results of this research indicate that the current trend toward rural hospital closure may directly affect the ability of subsidized rural primary care centers to survive. The latter study indicates that the centers are potential lower cost substitutes for hospital care and may actually speed the rate of decrease in utilization of rural hospitals. These conclusions were suggested by these studies but were not the primary targets of the studies cited. The role of the rural community hospital in a local and even regional primary care system is not well understood from the clinical and utilization standpoint, nor from the financial standpoint. A research project examining the interactions of the two types of organizations which focuses on the roles of Medicare and Medicaid in such a pattern of interaction should be initiated by the Health Care Financing Administration.

The specific research suggestions included in the text above represent responses to particular conditions found in rural primary care or are the result of interim results from related research. Those specifics can be considered in the contexts of both long- and short-term priorities for research. The following listing breaks down the specifics outlined above into those categories and adds other specific research projects which may have relevance to a research agenda in rural primary care developed by the Health Care Financing Administration.

Short Term Research Priorities

1. There is a need for a unified system of community-based monitoring and reporting of health status, vital event, and health resource information. This system would also be able to monitor difficulties in gaining access to care among rural residents and link those difficulties to changes in health status. The implementation of such a system is a short-term goal which will make long-term research possible. Such a classification scheme should include the development of more specific indices of rurality which would aid in the development of reimbursement criteria based on geographic location and the identification of populations with reduced access to the Medicare and Medicaid programs.

2. There is a need for a study of the short- and long-range implications of changes in the age distribution of rural populations for health care services and expected patterns of utilization of these services. The differential impacts in rural communities may require modification in planning as well as in reimbursement criteria for Medicare and Medicaid. The licensing and approval process for home health care as well as for long-term and acute facilities where it is affected by HCFA regulations should be examined for potential necessary changes due to the aging phenomenon.

3. Further research is needed to assess the extent to which rural-to-urban cross-subsidization of medical and health care occurs in order to provide a basis for programs to address rural-urban equity issues. This is especially important for the Medicare Part B program and may have important implications within the Medicaid Program where subsidization by the federal government of programs such as the CHC may represent a replacement of Medicaid payments due to state level reimbursement policies.

4. Further research is needed on the diffusion of specialists into larger rural areas and the effects on care and its effects on smaller rural areas. Have physicians begun to "congregate," drawing from urban areas as well as the smaller rural areas, thus changing the overall distribution of physicians? This phenomenon may be, in part, due to geographic differentials in payment formulae under HCFA programs.

5. What are the effects of competition from urban and suburban physicians on the rural primary care clinic and practitioner? Are rural primary care providers able to compete given the high costs of competitive aspects of care and smaller patient bases? To what extent has the centralization of health care resources in rural areas had the effect presumed to be associated with "regionalized" care programs? These questions need to be answered in the contexts of the Medicaid and Medicare programs where these programs represent the most important guarantors of financial access for rural populations.

Long Term Research Priorities

6. What are the long-term effects of the federal and other subsidy initiatives reviewed here when considered in the context of Medicare and Medicaid? Research into the effects of subsidy have only looked at short-term effects; there is a need for longitudinal studies of programs that have focused on rural areas including: analysis of physician migration into and out of rural practice situations, investigations of the organization and structure of practices and delivery organizations, analyses of impacts of those programs.

7. Measures of outcome for rural primary care are not well defined. Access measures and the analytic structure suggested by Andersen and Aday (1983) are currently most frequently used. However this appears to have little

utility where survey data are not available or surveys cannot be accomplished. As an alternative, Rutstein, et al., (1976) have suggested the use of "sentinel events," such as maternal deaths and illness or death from infectious disease. Research on outcomes or sentinel events and their relationships to structural aspects of care, sociodemographics of user populations, and perceptions of survey data are needed for both urban and rural primary care.

8. Work needs to continue in the direction of developing more and better indices of the quality of social life, general health status, and functional capacity which can be used in studies examining the outcome effects of broad social policies in ensuring the availability of primary health care.

9. Organizational issues remain problematic for rural primary care. The perceived need to keep the hospital viable has placed a dual burden on the clinic and the primary care practitioner. The hospital serves both as a competitor and a complement to rural primary care. Organizational linkages need to be built whereby the benefits of this complementary interaction can be maximized while reducing negative competition effects. Medicare and Medicaid policies can strongly influence this relationship.

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